



SUB-COMMITTEE ON STABILITY AND
LOAD LINES AND ON FISHING
VESSELS SAFETY - 38th session
Agenda item 10

TONNAGE MEASUREMENT

Second report of the drafting group

1 The report reflects the outcome of discussions in the drafting group on tonnage measurement concerning:

- .1 consolidated TM circular on interpretations of the 1969 TM Convention;
- .2 other issues as follows:
 - .2.1 consideration of term "spaces" in regulation I/13F of MARPOL 73/78 as "tanks" for the purpose of resolution A.747(18);
 - .2.2 entry on the International Tonnage Measurement Certificate (1969) in respect of a double hull construction under regulation I/13F of MARPOL 73/78;
 - .2.3 clarification of the date (18 July 1994) for entry into force of the 1969 TM Convention.

Consideration of the term "spaces" in regulation I/13F of MARPOL 73/78

2 The group is of the opinion that it is inappropriate to extend the definition of resolution A.747(18) concerning tonnage measurement of water ballast spaces to "spaces" as mentioned in regulation I/13F. The water ballast spaces are only ascertained in the IOPP Certificate.

Double hull construction under regulation I/13F of MARPOL 73/78

3 The group is of the opinion that it is up to the Administration concerned to state that the ship has a double hull construction according to regulation 13F on the backside of the ITC 69 under the REMARK column.

Clarification of the date for full entry into force of the 1969 Tonnage Convention

4 According to IMO circulars the International Convention on Tonnage Measurement of Ships, 1969, came into force on 18 July 1982 after signature by Japan on 17 July 1980. The group was of the opinion that following the wording of article 3(2)(d) of the Convention "twelve years after the date on which the Convention comes into force" would mean 18 July 1994.

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Other matters

5 The group further discussed the problems which may arise if a REMARK is not inserted in the REMARK column of the ITC 69. If such remark is made on a separate piece of paper it is valid only, if that paper refers specifically to the valid ITC 69.

6 The group requests the Secretariat to provide the Member States with an updated list of Contracting Governments including territories to which the 1969 TM Convention has been extended.

Consolidated TM.5 circular

7 After detailed discussions, the drafting group agreed on a consolidated TM.5 circular as set out in the annex, superseding circulars TM.5/Circ.1 (4 July 1983), TM.5/Circ.1/Corr.1 (13 February 1986) and TM.5/Circ.3 (5 July 1990) and to circulate this consolidated TM.5 circular as soon as possible, stating that it is applicable from 18 July 1994.

8 The group took note of the reservations of Italy regarding the proposal for the measurement of livestock carriers. Italy nevertheless expressed its intention to take note of the opinion of the majority.

9 The group also took note that Australia agreed on the proposal how to measure livestock carriers. However, Australia proposed a remark for smaller open-top container ships, defining the volume of upperdeck erections. The matter was not discussed by the drafting group.

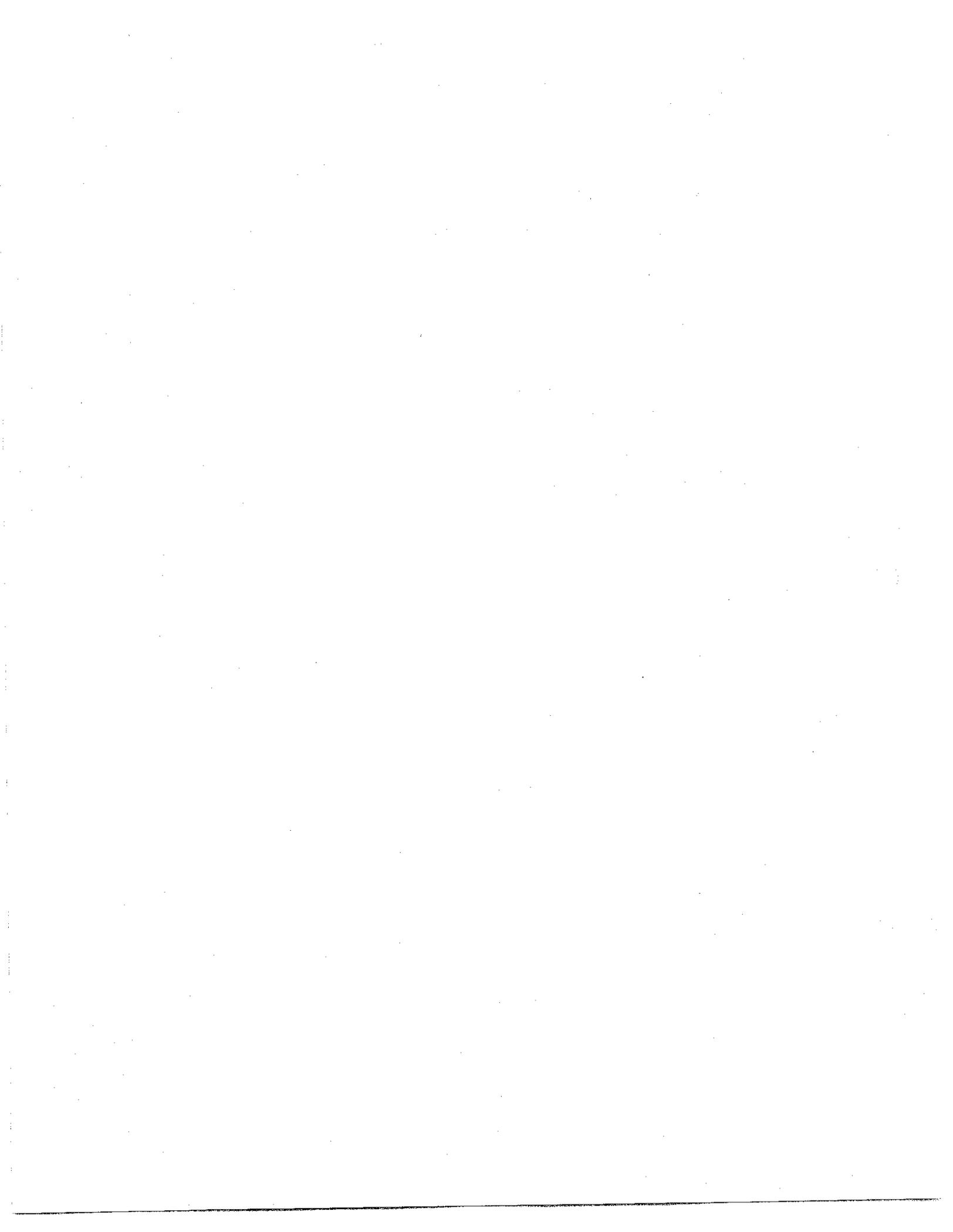
10 The group also discussed consideration of TM.5/Circ.4 regarding a provisional formula to calculate a reduced gross tonnage of open-top containerships. The group felt, however, that more information about open-top containerships and conventional containerships of modern design is necessary to discuss the matter further. The group recommends the Sub-Committee to invite Member States to submit further information for the next session.

Action requested of the Sub-Committee

11 The Sub-Committee is invited to approve the second report of the group in general, and in particular:

- .1 to consider the opinion of the group concerning "spaces" as mentioned in regulation 13F (paragraph 2) and decide as appropriate;
- .2 to consider the opinion of the group regarding the remark concerning a double hull construction according to regulation 13F (paragraph 3) and decide as appropriate;
- .3 to note further the opinion of the group regarding the date of the final coming into force of the 1969 TM Convention (paragraph 4);
- .4 to note the opinion of the group regarding the REMARK column of the ITC 69 and the request for an updated list of Contracting Governments (paragraph 5 and 6) and to take action as appropriate;

- .5 to agree on the consolidated TM.5 circular (paragraphs 7 to 9 and annex) as set out in the annex.
- .6 to invite the MSC to approve the TM.5 circular at its next session and to circulate it as soon as possible, stating that it is applicable from 18 July 1994.



ANNEX

INTERPRETATIONS OF THE PROVISIONS
OF THE INTERNATIONAL CONVENTION ON
TONNAGE MEASUREMENT OF SHIPS, 1969

Definitions (article 2(8))

1 When establishing the length of a rudder-less flat top barge, the length should be calculated at 96 per cent of the total length of a waterline at 85 per cent of the least moulded depth measured from the top of the keel.

2 Column-stabilized units such as semi-submersible drilling units should be considered novel types of craft. Because the length under article 2(8) or the moulded breadth under regulation 2(3) for such ships is misleading, it would be appropriate for such ships to use the overall length and breadth to the outside plating between fixed structures. The citation of the length (article 2(8)) and breadth (regulation 2(3)) in the respective boxes of the International Tonnage Certificate (1969) should be deleted and a notation in "Remarks" should be made to identify the ship as, inter alia, a "semi-submersible drilling unit", etc.

Application (article 3(2)(d))

"Alterations or modifications which affect its tonnage" in Assembly resolution A.758(18) means increase or decrease of more than 1% in either existing or 1969 gross tonnage.

Form of Certificate (article 9(2))

1 The "Date" shown on the front of the International Tonnage Certificate (1969) refers to the year when the keel was laid or the ship was at a similar stage of construction (article 2(6)) or the ship underwent alterations or modifications as defined in article 3(2)(b) but when the year of construction or alteration or modification is 1982 or 1994, the month and day should also be described.

2 Information inserted in the "location" columns on the reverse of the International Tonnage Certificate (1969) should not be detailed.

3 The phrase "Date and place of original measurement" should refer to the issue of the original International Tonnage Certificate (1969) and should have no reference to measurement under pre-existing national systems.

4 The phrase "Date and place of last previous remeasurement" should refer to the date and place of issue of the last International Tonnage Certificate (1969).

Cancellation of Certificate (article 10(2))

Ships having an International Tonnage Certificate (1969), which do not comply with interpretations agreed on in the regulations of the Convention, should be remeasured. The new characteristics should be determined and applied without delay.

Inspection (article 12)

A copy of the tonnage calculations may be provided together with the International Tonnage Certificate (1969) to the ship's master. Although not a requirement, nothing in the Convention would prevent Administrations from providing these calculations to ships flying their flag.

Definition of terms used in the Annexes (regulation 2)

The following interpretations apply to the terms given in the paragraphs of regulation 2:

- 1 "Upper Deck" - the following should be observed:
 - 1.1 A discontinuity in the upper deck which extends over the full breadth of the ship and is in excess of 1 m in length should be treated as a step as defined in regulation 2(1) (see figure 1 in appendix 1).
 - 1.2 Steps situated outside the "length" (article 2(8)) should not be considered.
 - 1.3 A discontinuity in the upper deck which does not extend to the side of the ship should be treated as a recess under the upper deck level (see figure 2 in appendix 1).
 - 1.4 In a ship having openings in the side of the ship below the uppermost deck, which are not closed but limited inboard by weathertight bulkheads and decks, the deck below such openings should be considered the upper deck (see figure 3 in appendix 1).
- 2 "Watertight" - The Administration may decide on this term as a special definition for tonnage purposes is not needed.
- 3 "Amidships" - This term should be considered as the midpoint of the length as defined in article 2(8) where the forward terminal of that length coincides with the fore side of the stem.
- 4 "Enclosed Spaces" - the following should be observed:
 - 4.1 In paragraph (4) there is no contradiction between the definition of enclosed spaces as being "bounded by the ship's hull, by fixed or portable partitions ..." and "... nor the absence of a partition shall preclude a space from being included in the enclosed space".
 - 4.2 Space located within the boundaries of "permanent or movable awnings" should be subject to treatment under regulation 2(5).

- 4.3 Tanks, permanently located on the upper deck, provided with removable pipe connections to the cargo system or the vent (de-airing) lines of the ship, should be included in V_C .
- 4.4 The volume of weathertight steel pontoon covers on hatchway coamings should be included in the calculations of the total volume (V) of the ship. If such covers are open on the underside, their volume should also be included in V_C .
- 4.5 Multi-purpose vessels which have the facility to trade with cargo hatches open or closed should always be measured with the hatch covers considered to be closed.
- 4.6 Masts, kingposts, cranes, crane and container support structures, which are completely inaccessible and above the upper deck, separated on all their sides from other enclosed spaces should not be included in the total volume of all enclosed spaces. Air trunks having a cross-sectional area not exceeding 1 m^2 may also be excluded under the before-mentioned conditions. All mobile cranes have to be exempted.
- 5 "Excluded Spaces"
- 5.1 The space between the side longitudinal bulkhead of a deckhouse and the bulwark below a deck extending from side to side supported by stanchions or vertical plates connected to the bulwarks, should be treated as an excluded space in accordance with regulation 2(5)(b) and (c) (see figure 4 in appendix 1);
- 5.2 In the case of a ro/ro ship, for example, where the space at the end of an erection is fitted with means for securing cargo, the space should be included in V in accordance with the first condition of regulation 2(5).
- 6 "Passenger" - N_1 and N_2 should be obtained from the Administration's maritime safety authority.
- 7 "Cargo Spaces"
- 7.1 The volumes of the segregated ballast tanks should not be included in V_C provided they are not to be used for cargo.
- 7.2 The volumes of clean ballast tanks in oil tankers should be included in V_C when the ship is fitted with a crude oil washing system which would permit dual purpose cargo/clean ballast tank use of these tanks.
- 7.3 The volumes of dedicated clean ballast tanks should not be included in V_C provided that the:
- .1 tanks are not used for cargo;
 - .2 ship carries a single IOPP Certificate which indicates it is operating with dedicated clean ballast tanks in accordance with regulation 13A, Annex I, MARPOL 1973/78;

- .3 following notation is inserted in the "Remarks" column on the International Tonnage Certificate (1969):

"This ship carries an IOPP Certificate in conformity with regulation 13A, Annex I, MARPOL 1973/78. The following tanks are dedicated solely to the carriage of clean ballast water: _____."

- 7.4 The volumes of slop tanks for cargo residues should be included in V_C .
- 7.5 In fishing vessels, the volumes of fish processing spaces for fishmeal, liver oil and canning, tanks for re-cooling fish, wet fish bunkers, stores for salt, spices, oil and tare should be included in V_C . Fishing gear stores should not be included in V_C .
- 7.6 The volume of refrigerating machinery used for refrigerating cargoes and situated within the boundaries of the cargo spaces should be included in V_C .
- 7.7 The volumes of mail rooms, baggage compartments separate from passenger accommodation, and bonded stores for passengers should be included in V_C . The volume of provision rooms for crew or passengers and bonded stores for crew should not be included in V_C .
- 7.8 On combination carriers, where the owners request to have the dual purpose oil/ballast tanks converted to ballast tanks and excluded from V_C , the ballast tanks should be required to be permanently disconnected from the oil cargo system and not used for the carriage of cargo. The ship should then be remeasured in accordance with regulation 5(3). Any ballast tanks not to be included in V_C should be solely allocated to ballast, connected to an independent ballast system, and not used to carry cargo.
- 7.9 When determining the volumes of cargo spaces, no account should be taken of insulation, sparring or ceiling which is fitted within the boundaries of the space concerned. For ships which have permanent independent cargo tanks constructed within the ship, e.g. gas tankers, the volume to be included in V_C should be calculated to the structural boundary of such tanks, irrespective of insulation which may be fitted on the inside or outside of the tank boundary.
- 7.10 The volumes of dual purpose spaces such as those used for both ballast and cargo should be included in V_C .
- 7.11 Spaces allocated to passenger automobiles should be included in V_C .

Gross and Net Tonnage (regulations 3 and 4)

1 The K_1 and K_2 coefficients used in the gross and net tonnage calculations may be derived from either the table in appendix 2 of the Convention or from the formula in regulation 3 or 4 respectively at the discretion of the Administration.

2 The final tonnage figures determined in accordance with regulations 3 and 4 and stated in the tonnage certificate should be given in rounded down figures without decimals.

Calculation of Volumes (regulation 6)

- 1 Bulbs, fairwaters, propeller shaft bossings or other structures should be treated as appendages.
- 2 Hawse pipes, sea-valve recesses, thruster tunnels, stern chutes in fishing vessels, dredging wells in dredgers and other similar spaces fitted in the ship's hull should be dealt with as spaces open to the sea.
- 3 Enclosed spaces above the upper deck, appendages and spaces open to the sea not exceeding 1 m³ should not be measured.
- 4 Volumes within the hulls of ships, such as split-hull barges and dredgers, should be retained in V and V_C notwithstanding that the space within the hull is temporarily opened to the sea when discharging cargo (see figure 5 in appendix 1).

Measurement and Calculation (regulation 7)

- 1 When a tonnage certificate and a copy of the calculations of the tonnages are transmitted to another government in accordance with article 8(2) or 10(3) of the Convention, they should be accompanied by a form as shown in appendix 2, showing the main particulars of the tonnage calculations for easy reference. When listing underdeck volumes, the volumes may be combined (e.g. underdeck/extended forecandle, etc.) on the form.
- 2 Administrations should decide on the degree of accuracy required for the tonnage calculations.

Special types of ships

1 Livestock carriers

1.1 Livestock carriers are most often converted ships. Above the existing upper deck, one or more decks are constructed. Between these decks, the livestock corrals and their associated spaces are arranged, separated by, for example, railings, fences or gangways. The corrals are open to the air.

1.2 Stanchions, fences and railings to keep livestock in the corrals are "other means for securing cargo" according to regulation 2(5).

1.3 In applying the regulations of the 1969 Tonnage Convention, livestock structures should be included in the gross tonnage.

2 Dockships

2.1 A dockship may include in its main structural characteristics the absence of hatch covers above the cargo space but may have a dock deck above the moulded draught together with side erections (see figure 6 in appendix 1).

2.2 The dockships considered are described as:

.1 a dockship open-ended at the stern (see figure 7 in appendix 1);

.2 a dockship fitted with a stern door or a grill stern door (see figure 8 in appendix 1).

2.3 The space above the dock deck, bounded on at least three sides by erections and intended for the carriage of cargo is included.

2.4 In this context an erection is defined as being an enclosed space bounded by bulkheads and a deck above.

3 Open-top containerships

3.1 An open-top containership, for the purpose of application of the 1969 Tonnage Convention, means a ship which is designed for the carriage of containers and is constructed like an open "U", with a double bottom and above this high-sided erections without hatch covers on the upper deck and without a complete deck above the moulded draught (figure 9 in appendix 1), and needs to be regarded as a ship of a novel type as referred to in regulation 1(3).

3.2 The provisions of the regulations of the 1969 Tonnage Convention should be applied to open-top containerships subject to the following unified interpretations.

.1 Upper Deck - regulation 2(1)

In a ship which is exempted by the Administration from the requirements to fit weathertight hatch covers on the uppermost deck exposed to weather and sea, as in an open-top containership, the upper deck should be taken as that deck which would have been determined by regulation 2(1) as if such hatch covers had been fitted.

.2 Enclosed Spaces - regulation 2(4)

In open-top containerships, an opening in a deck such as the absence of hatch covers should not preclude a space from being included in the enclosed space.

.3 Shelter above containerstacks

In the case of open-top containerships having movable non-load-bearing covers (shelter) of light construction resting on the containerguides, the space above the hatch coamings up to the covers does not qualify as an excluded space according to regulation 2(5). For this particular design, however, an exception can be made in accordance with regulation 1(3). The space can be excluded provided that this type of vessel meets the requirements of an open-top containership without such covers.

APPENDIX 1

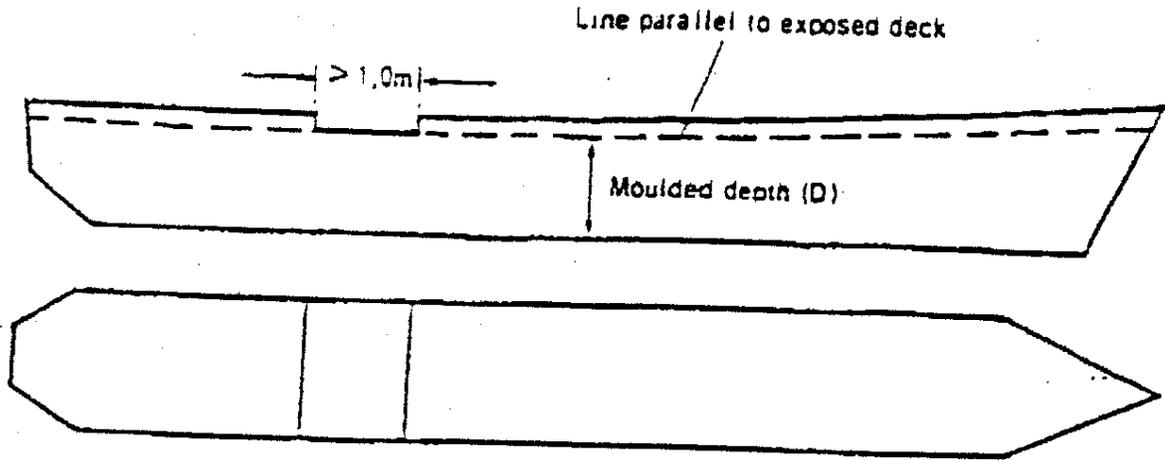


Figure 1

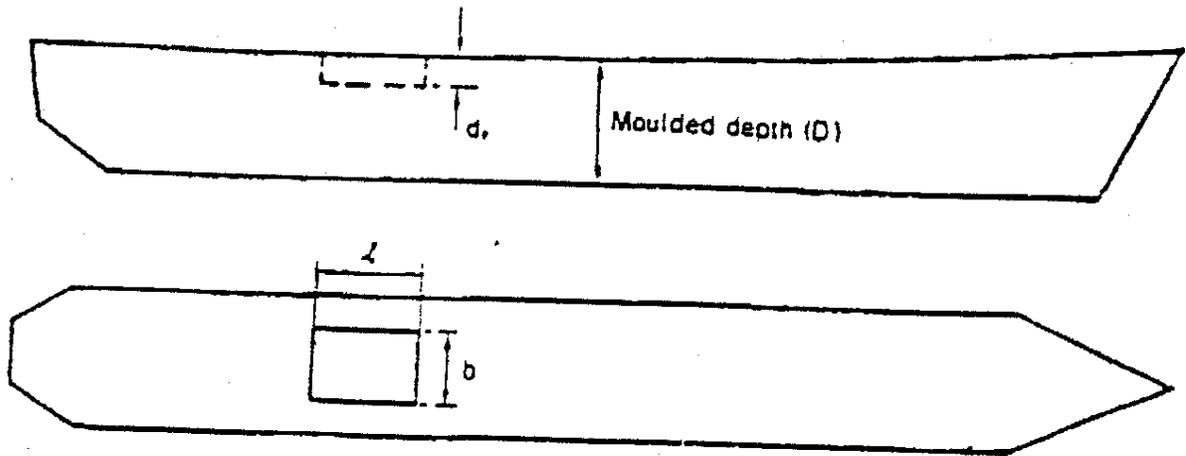


Figure 2

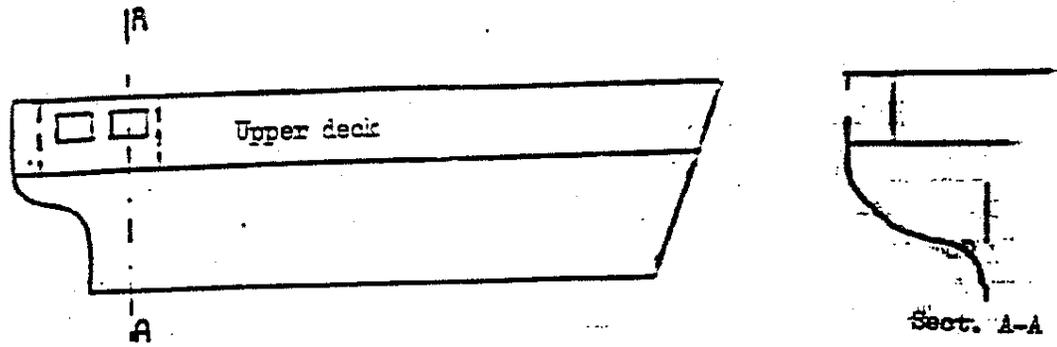


Figure 3

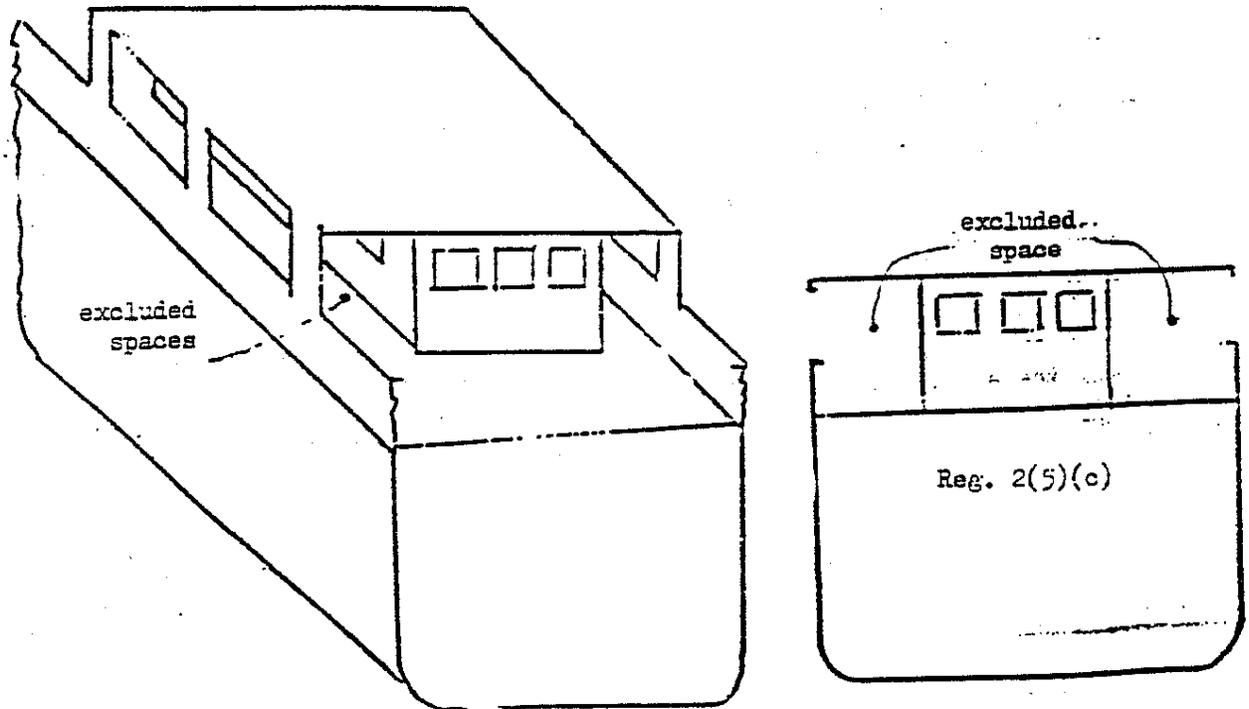
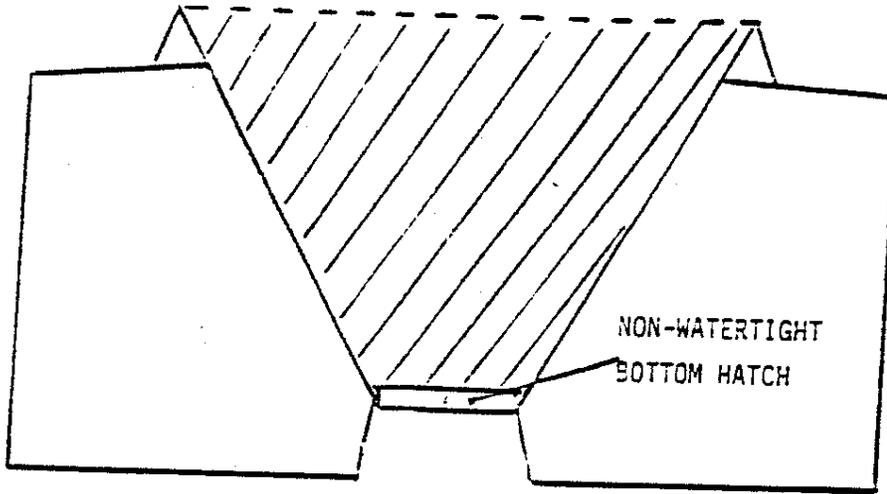


Figure 4



Shaded volumes included in V and V_c

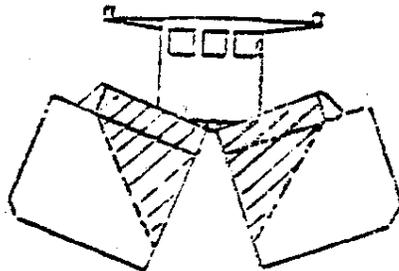


Figure 5

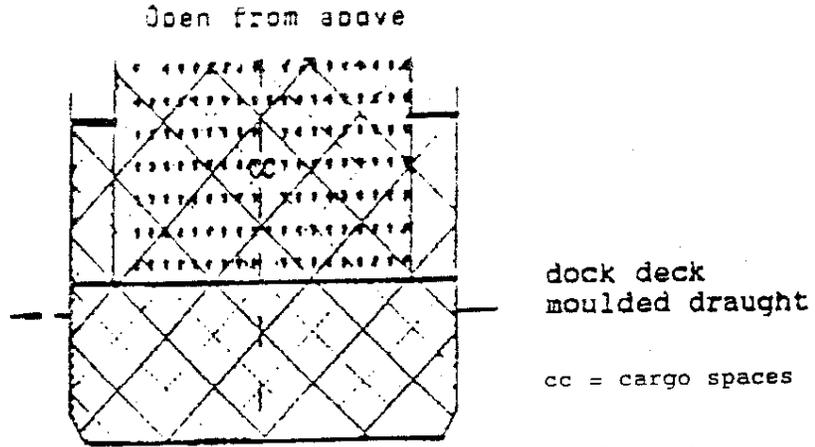
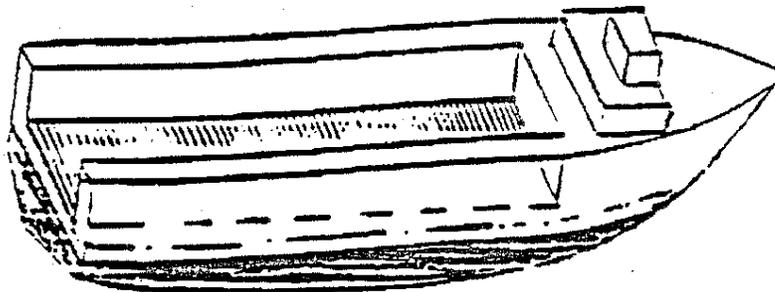
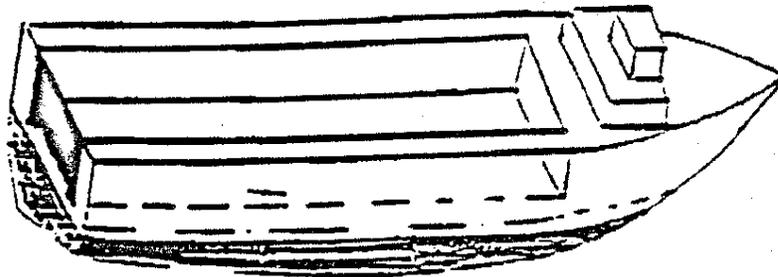


Figure 6



(1) type of dock
ship
(aft end open)

Figure 7



(2) 'equipped
with stern flap
or aft bulkhead

Figure 8

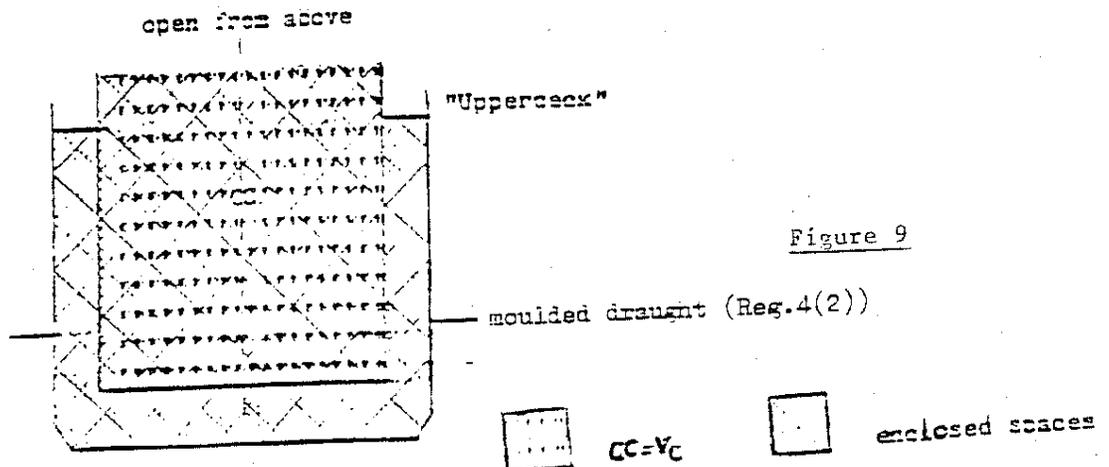


Figure 9

APPENDIX 2

FORM GIVING PARTICULARS OF UNIFORM TONNAGE CALCULATION

GROSS TONNAGE

Item No.	Name of Space	Location	Length	Moulded Volume
	Underdeck Poop Bridge Forecastle Deckhouses Hatches, etc.			
		Total Volume		
NET TONNAGE				
	No. 1 Hold No. 2 Hold, etc. No. 1 Tween Decks No. 2 Tween Decks, etc. Hatches, etc.			
		Total Volume		

